

### **REMARKS**

Claims 21-30 are pending in this application. Applicants have amended claims 21 and 30 to indicate that the load cell is vertically mounted between the upper and inner plate, and that the load pin of the load cell assembly contacts the outer surface of the inner plate. Support for this amendment can be found in FIG. 3a and on page 11, lines 13-17 of the specification. Applicants respectfully submit that no new matter has been added.

Applicants wish to thank the Examiner for the indication that claims 22-29 are allowable.

Claims 21 and 30 stand rejected under 35 USC § 102(b) as being anticipated over U.S. Patent No. 6,532,830 issued to Jansen et al. (hereinafter "Jansen"). These rejections are traversed for at least the following reasons.

The Manual of Patent Examining Procedure "MPEP" § 2131 states that, in order to anticipate a claim, a reference must teach every element of the claim:

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989)."

Applicants respectfully submit that the Jansen reference has failed to disclose all the elements of claims 21 and 30 as amended herein.

Claim 21 is drawn to an apparatus for measuring a load applied to a quantity of material. Claim 30 is drawn to an apparatus for calculating a location of a resultant force. Both claim 21 and 30, as amended, are drawn to an apparatus having "a vertically mounted load cell assembly comprising at least three load cells, each load cell comprising an upper portion and a load pin, wherein the upper portion of the load cell is connected to the outer plate and the load pin of the load cell contacts the outer surface of the inner plate, and wherein the load cells are substantially evenly spaced apart." See Claims 21 and 30. (emphasis added). Furthermore, both claims 21

and 30 indicate that the apparatus comprises “an inner plate having an inner surface and an outer surface, said inner surface of said inner plate being positionable against a portion of the quantity of material”

The Jansen reference is directed towards a high-payload six axis load sensor. The sensor includes a table 1, a base 2, three shear pin load transducers 3, and a series of flexures 4. The Examiner asserts that the table 1 of Jansen is analogous to the inner plate of the present invention and that the base 2 of Jansen is analogous to the outer plate of the present invention. The Examiner argues that inner surface of the table of Jansen is positionable against a portion of material. In a detailed review of Jansen, however, it does not appear that any “material” is positioned against the table. Jansen discloses that “the shear-pin load transducers measure reaction forces between an input table and base produced by forces or torques, separately or in combination, applied to the input table.” (See col. 4, lines 31-34 of Jansen, emphasis added). The Jansen reference contains no disclosure that any material is positioned against the input table, only that forces or torques are applied to the table. The Examiner has asserted that designation number 4 of Jansen represents the material, however Jansen indicates the designation number 4 represents the flexures in the input table (See col. 4, line 63 of Jansen).

Furthermore, as seen in FIG's 1-2, and particularly in FIG. 3 of Jansen, the load pin transducers of Jansen are horizontally mounted. Jansen discloses that “Specifically, each shear-pin load transducer 3 can be securely, but removeably, inserted into a side wall of table 1 through a spherical bearing 5 until the tip of the shear-pin load transducer reaches a terminus before the wall of flexure 4.” See col. 5, lines 42-45 of Jansen, emphasis added. Jansen clearly indicates in both the specification and the drawings that the load pin of the load cell is horizontally mounted and passes through a spherical bearing 5 housed in the outer plate and is received into a side wall in the table. In contrast, claims 21 and 30 indicate that the load cell assembly of the claimed invention is vertically mounted, and that the load pin contacts the outer surface of the inner plate, and is not received in the side wall of the inner plate as taught by Jansen. The presently claimed load cell design allows for a simple construction of the load cell, without having to deal with the complexity needed to fit a spherical bearing within a plate while requiring a load pin to pass through it.


Additionally, the presently claimed design allows for a measurement of a “a combined resultant force to the quantity of material when a force is exerted against the outer surface of said outer plate.” See claim 30, emphasis added. Claim 21 of the present invention also indicates that the load cell assembly “measures the load applied to the quantity of material when a force is exerted against the outer surface of said outer plate.” In the Jansen patent, the force is exerted against the table (i.e. the inner plate), and not the outer surface of the outer plate. Jansen discloses that “The shear-pin load transducers measure reaction forces between an input table and base produced by forces or torques, separately or in combination, applied to the input table.” (See col. 4, lines 31-34 of Jansen, emphasis added). Furthermore, the horizontal load cell assembly of Jansen is designed to measure the “reaction forces between an input table and base” produced by the forces applied to the table. In contrast, claims 21 and 30 are directed toward measuring the “load applied to the quantity of material” (See claim 21) and to calculate “the location of a resultant force” of the quantity of material (See claim 30). No such limitations are taught or disclosed by Jansen.

Applicants respectfully submit that the Jansen reference fails to disclose all of the elements of claims 21 and 30 and therefore fails to anticipate the claims. Applicants respectfully request that the Examiner withdraw the rejections to the claims based on this ground.

**SUMMARY**

Based on the foregoing, Applicants respectfully submit that the present application is in condition for allowance, and a favorable action thereon is respectfully requested. Should the Examiner feel that any other point requires consideration or that the form of the claims can be improved, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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